National Audit Office

REPORT

Regulating for investment and outcomes in the water sector

Department for Environment, Food & Rural Affairs

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Key facts[1]

£290bn

amount water companies plan to spend on infrastructure improvements over the next 25 years

5bn litres

estimated daily shortfall in water needed in England by 2050, based on current usage rates

700 years

time to replace existing water mains, at the current rate of 0.14%; the average rate of replacement since privatisation was 0.83%

70%	increase in water companies' spend expected over the next five years (2025–2030) compared with the previous five years (2020–2025)
18,000	projects to be delivered by water companies in the next five years through the Environment Agency's (EA's) 2024 Water Industry National Environment Programme
£27 billion	enhancement spend over the next five years for actions required by EA
30	major water supply projects, including nine reservoirs, where construction is proposed to start over the next 15 years
Three	companies (of 16) in 'cash lock-up' and unable to make certain financial transactions without Ofwat's permission, due to poor credit ratings

1 All monetary figures set out in the Key facts are in 2023-24 prices.

Summary

Introduction

1 Water is essential for human health, the environment and the economy. A shortfall of nearly 5 billion litres of water per day is expected by 2050, based on current usage rates. This is more than a third of the 14 billion litres currently used daily. In England and Wales, the supply of clean drinking water to homes is predominantly managed by 16 companies, of which 11 also supply wastewater services.[2] The work they do, and the amount they charge the public for their services, is overseen by regulators who are responsible for protecting the interests of the public and the environment.

2 In 2023 the government published the *Environmental Improvement Plan*, which sets out targets for the sector to reduce: the impact of sewer discharges; phosphorus in treated wastewater; public consumption per head; and leakage. Companies estimate that almost £290 billion of additional spending will be needed over the next 25 years to meet these targets and address supply and environmental challenges.[3] The ability of the regulatory framework to ensure the sector both delivers value for money and attracts the investment needed is crucial to the sector's success.

3 The Department for Environment, Food & Rural Affairs (Defra) is the government department with policy responsibility for the water sector, and there are three regulators who oversee the companies. The Water Services Regulation Authority (Ofwat) is responsible for ensuring the plans are funded appropriately, and set an expected rate of return to investors commensurate with the risk. Ofwat sets the sector's funding envelope for every company every five years through the price review (PR) process. The Environment Agency (EA) regulates for the impact on rivers and other water bodies and oversees seven long-term plans and planning frameworks that water companies produce and work to. The Drinking Water Inspectorate (DWI) regulates for drinking water quality and sufficiency.

2 As at February 2025 there are 16 water companies. In February 2023 Bristol Water was acquired by South West Water.

3 This £290 billion of additional investment is on top of normal day-to-day spending. It covers work to meet environmental ambitions as well as other sector challenges such as cyber security and net zero. All monetary figures set out in the report are in 2023-24 prices.

Scope of this report

4 This report examines the effectiveness of the regulatory regime in delivering long-term objectives, incentivising operational performance improvements, and attracting the investment needed to meet the government's specified outcomes.

5 We examine the regulatory planning process and methodology underpinning the current price review (PR24), which sets funding over 2025-26 to 2029-30, and assess regulatory performance over the last two price review control periods 2020-21 to 2024-25 (PR19) and 2015-16 to 2019-20 (PR14). This report covers the following.

- Part One sets out the challenges the sector and the regulators currently face to improve performance and consumer trust.
- Part Two assesses how the regulatory framework identifies, plans for and delivers long-term objectives.
- Part Three assesses how the regulatory framework incentivises the operational and financial performance of water companies in the short term and consequences for how attractive the sector is to investors.

6 This report does not directly evaluate the actions of water companies, because they are not our audited bodies. Nor does it consider issues outside the remit of historical regulatory powers, such as executive pay. This report does not consider how water regulation connects with wider issues, such as local authority planning and other sectors that impact on water quality, such as agriculture. It is not a review of specific regulatory decisions, such as enforcement action or setting individual company allowances, or the appeals process. This report also does not examine the differential impact of regulatory decisions, for example on vulnerable consumers.

7 The audited bodies that fall within the scope of this report are Defra, Ofwat, EA and DWI. While Defra and EA have responsibility in England, Ofwat and DWI have responsibility in England and Wales. Geographically, we cover Ofwat's and DWI's work across England and Wales, and Defra's and EA's work across England. We do not assess the actions of the Welsh Government or Natural Resources Wales, whose work is audited by the Auditor General for Wales. An independent Commission, headed by Sir Jon Cunliffe, is currently reviewing the water sector regulatory system. We are aware of their review but have conducted our work separately.

Key findings

The challenges facing the water sector

8 **A significant increase in investment is needed to enable the water sector to address current and future challenges, and this is changing the risk profile of the sector.** In 2023 Defra set out ambitions for the sector to meet the anticipated water shortfall and address environmental concerns. However, Defra did not assess the cost or deliverability of its ambitions, except for storm overflows. Companies estimate almost £290 billion enhancement spend will be needed over the next 25 years and Ofwat estimates a further £52 billion will be needed to deliver up to 30 water supply projects, including nine reservoirs. Over the next five years companies will increase their spending by 70% and spend £47 billion on enhancements (paragraphs 1.3, 1.7 to 1.10, 2.5 to 2.7, 2.39 to 2.40, and 2.42).

9 **Ofwat and Defra recognise that this rise in investment will lead to increases in customer bills.** Water companies fund expenditure by raising debt and equity financing. Customer bills cover operating costs, a contribution towards capital repayments and returns on this financing. In 2023 Defra conducted an impact analysis recognising the impact of the *Storm Overflows Discharge Reduction Plan* for customer bills. Ofwat estimates customer bills will rise on average £31 per household per year over the next five years, before inflation, to fund additional spending. Defra and all of the regulators need to ensure that water companies can attract the investment needed to fund the required improvements and assure customers that their bill rises are justified and that the money will be used correctly (paragraphs 1.8 to 1.10, and 2.8, and Figure 1).

10 **Performance of the sector has led to a decrease in consumer trust.** The UK has one of the highest standards of drinking water quality in the world. However, a survey commissioned by Ofwat and the Consumer Council for Water found consumer trust had fallen across a range of areas including in whether companies acted in the interests of the environment and provided a reliable service. The highest-profile cause of environmental harm is use of storm overflows, where companies release untreated sewage into rivers and seas. Companies have met a target to fit monitors to every storm overflow, and as at January 2025 Ofwat and EA were investigating every wastewater company. Performance in key measures including mains bursts, supply interruptions and pollution incidents has not significantly improved since 2015-16. The average annual dividend was 9% of equity between 2015-16 and 2019-20. This fell to 3.5% between 2020-21 and 2023-24 (paragraphs 1.6, 1.11 to 1.14, 1.19 to 1.20 and Figures 2 to 7).

Long-term planning

11 **There is no consideration of planning solutions at a national level.** All three regulators require water companies to produce individual company plans on specific topics such as drinking water safety. Companies are required to work together, and with EA, to produce regional water resource plans. However, none of the regulators have a duty to ensure there is a coherent national plan for the water sector. Despite increasing pressures on water supply and unprecedented investment in new infrastructure, there is no coherent national system where integrated decision making can take place (paragraphs 2.2 to 2.4).

12 **Defra's regulatory framework for the water sector is complex and there are inconsistencies in approaches and processes.** There are twelve different plans and planning frameworks that companies must develop and work within, such as plans to manage river basins, as well as drainage and wastewater. Delays and changes to guidance, and inconsistent planning assumptions for the most recent price review period, may have affected the quality of water companies' plans (paragraphs 2.10 to 2.12 and 2.29 to 2.31, and Figure 9).

13 **The regulators have inconsistent responsibilities and there are gaps in oversight of the sector.** The DWI has a responsibility to inspect drinking water assets and maintain network security. However, there is not a regulator with comparable responsibility for wastewater assets or network security, including cyber security (paragraphs 2.3 to 2.4 and Figure 8).

14 **EA has duties to the water environment but is not required to balance them with net zero or cost considerations.** EA oversees seven long-term plans and planning frameworks that shape water companies' actions. Over the next five years this includes over 18,000 actions by water companies, and accounts for £27 billion of the sector's anticipated £47 billion enhancement spend. EA is bound by its statutory duties with regard to the sector, which focus on the condition of the water environment. EA does not balance the water environment with customer affordability or net zero when reviewing plans, because it does not have statutory duties to customers or the sector's net zero impact. Companies told us they felt that, in regulatory decisions, EA prioritises meeting legislative water quality targets over innovative solutions with better nature and net zero implications (paragraphs 2.2 to 2.4, 2.11 and 2.13 to 2.14, and Figures 8 and 9).

15 **Ofwat sets how much water companies can charge customers via the price review process, which is complex and difficult for investors to understand.** Ofwat began sharing plans for the 2024 price review process in December 2020, and finalised determinations in December 2024. As part of setting what companies can charge customers, Ofwat sets the sector's funding for day-to-day operations based on the spending of companies who carry out their work at the third or fourth lowest cost. It also sets the expected returns for investment. It uses a large and varied set of mechanisms to adjust allowed costs and provide financial incentives to improve performance. It has also set up an Innovation Fund to encourage companies to innovate, grow capacity, and enhance collaboration. The final methodology for the most recent price review comprised over 60 documents, and around 2,000 pages. Investors told us they found the complexity makes the process hard to understand, and they focus their attention on financial performance metrics. Some companies wait until the planning process and the price review are finished to finalise their funding or operational plans. As a result, company capital expenditure has tended to follow a cyclical pattern within each price review of first increasing and then decreasing, with knock-on effects for delivery of work (paragraphs 2.19 to 2.31, 2.34 and 2.38, and Figures 10 and 11).

16 **Ofwat is introducing new mechanisms to address concerns around delivering long-term projects with existing processes.** Major projects, such as the construction of new reservoirs, will take a long time to deliver and cover multiple price review periods. Ofwat has allowed specific funding in price reviews for companies to develop their plans for these projects. It is setting up new processes to manage the projects outside price reviews. Ofwat expects companies to use competitive procurement where possible to deliver these projects. Ofwat expects that this will reduce risks to both delivery and value for money. However, it raises new risks for both water companies and the regulator as to the skills needed to manage, deliver, and regulate such contracts (paragraphs 2.38 to 2.44).

17 **The regulators do not have a shared understanding of the condition of water and wastewater assets, and the level of funding needed to maintain them.** Ofwat, EA and DWI all have an interest in overseeing the condition of these assets, as they affect how well water companies can carry out their operations, but they do not have a comprehensive set of standards or metrics. In 2024 Ofwat set out plans to work with water companies to develop a shared understanding of asset condition and how it can be improved. Ofwat expects companies to maintain assets through base expenditure. Despite overspending on operational expenditure over the last four years, companies have done less work on specific areas of asset health than Ofwat's expectations. The rate of replacement of water mains has been 0.14% a year over the first four years of the PR19 control period, which – if maintained – would mean the entire network would be replaced once every 700 years. Ofwat allowed expenditure for a replacement rate of 0.4% per year over the PR19 control period and is expecting companies to raise the rate further in future. The average rate of replacement since privatisation was 0.83% or replacement once every 125 years (paragraphs 2.45 to 2.48).

Balancing incentives for short-term performance with financial sustainability

18 **Ofwat has introduced financial incentives to encourage companies to improve performance, which has resulted in penalties for most companies in the PR19 control period.** In PR14 Ofwat introduced Outcome Delivery Incentives (ODIs) to drive performance improvements, offering a financial reward if performance exceeds an agreed level, and a penalty if performance is below the target. Over the PR14 control period, companies received an average net penalty from ODIs of 0.03% of regulated equity, and over the PR19 control period they received a net penalty of 0.67%. Where companies improve but do not meet the target agreed with Ofwat, they are penalised. For example, the companies with the poorest performance on supply interruptions in 2019-20 had reduced the time consumers were without water by 26% by 2023-24 but were penalised £129 million over the period. ODIs reduce returns for companies with the lowest performance, who are likely to need to increase expenditure the most. Ofwat expects that investors will meet the funding shortfall (paragraphs 3.17 to 3.21 and Figures 14 and 15).

19 **Performance has not been consistent or significantly improved in recent years.** Performance of the median company over the PR19 control period has improved in six out of 12 key ODI measures and decreased in six. At the same time, companies have spent 12% more than the allowances set by Ofwat in the first four years of the PR19 control period. Some of the overspend will be due to above-inflation cost increases, including labour and energy, and companies will be able to recover part of their overspend via customer bills (paragraphs 3.13 to 3.14 and 3.16 to 3.18, and Figure 13).

20 **The financial resilience of the sector has weakened.** On average the sector made total operational losses equivalent to 3.4% of regulated equity in the last four years. However, most companies mitigated the operational losses through financing gains due to paying a lower cost of debt, and lower amounts in tax, than Ofwat's assumptions. As a result, the sector made an average return of 2.78% of regulated equity over the last four years, lower than the 4.19% expected in 2019. Shareholders have benefited from an increased value of the company, which is indexed to inflation. The extent to which income from operations covers interest payments has declined since 2016. In 2023-24, 10 companies did not generate enough income to cover their interest payments. Three companies out of 16 are in 'cash lock-up' because their credit rating is lower than Ofwat's minimum required rating. Ofwat has signalled concerns about the financial resilience of 10 of the 16 major companies, up from eight in 2021-22 (paragraphs 3.7 to 3.12, 3.16, 3.22 and 3.34, and Figure 16).

21 **Defra and Ofwat have taken action to enable earlier intervention in the event a company is in financial distress.** Ofwat has extended its powers, including to prevent companies paying dividends when they are below Ofwat's minimum required credit rating. Three companies currently cannot pay a dividend without Ofwat's permission. In addition, recent changes to the special administration regime enable a company's assets to be sold on more easily, and mean that debt investors might receive less than in a normal insolvency. These changes are affecting how investors view the riskiness of the sector. In the event of insolvency, the government can recover its costs associated with special administration through customer bills if it cannot recover the costs elsewhere (paragraphs 3.23 to 3.25, 3.27 to 3.31, and 3.34).

22 **Costs are increasing for customers as the credit-worthiness of the sector has declined.** There has been a perceived decline in the stability and predictability of the regulatory framework, as well as the financial position and performance of companies. One credit rating agency has explicitly linked the rating it gives to individual companies to the stability and predictability of the regulatory environment, which it downgraded in November 2024. Credit-worthiness affects the cost of debt, and this has gone up relative to other sectors for 2025–2030. The higher costs reflect how attractive the sector is to investors and will feed through to customer bills (paragraphs 3.30 to 3.35).

Conclusion on value for money

23 Defra and the water sector's regulators have not encouraged water companies to spend what they need to deliver the performance expected. The sector now faces significant environmental and supply challenges. To meet these challenges, it will need to attract investment and spend at a rate not seen before. The regulators must understand the scale of the challenge in terms of cost and deliverability and the condition of assets across the sector, ensure the sector raises the investment needed and meets government outcomes, and achieve value for money for bill payers.

24 The regulators have taken steps to incentivise companies to improve their performance and align investor and customer interests, but both consumer trust and the financial resilience of the sector have declined. The regulatory framework has contributed to worsening investor perception of the sector. Both consumers and investors must have trust that money is being well spent, and that returns are predictable and appropriate. Defra and the regulators must work to achieve this for the long term.

Recommendations

25 Alongside any recommendations made by the independent Commission, we expect Defra and the regulators to respond to our recommendations below. We recommend the following on roles and responsibilities across the regulatory framework.

a For future plans, Defra needs to understand the costs and deliverability of targets and the impact on customers' bills.

b Defra should consult on options to ensure delivery of a coherent national system plan for water, including balancing trade-offs between different duties.

c Defra should address gaps in responsibilities, particularly around the wastewater network, and ensure regulators work together to achieve the same outcomes for the environment and customers.

d EA must understand whether actions in water company plans are being delivered and having the intended impact and delivering statutory environmental targets.

To improve future planning and price reviews, we recommend the following.

e EA, Ofwat and DWI should align deadlines and limit inconsistencies in planning timelines and assumptions.

f Given the limited progress in developing a common understanding of asset health, Ofwat should continue to work with the sector, EA and DWI, reach a conclusion, and deliver its Roadmap for enhancing asset health understanding in the water sector on time.

g Before the development of PR29 methodology, Ofwat should consider whether it can act to simplify the price review methodology. This should include evaluating the impact of outcome incentives on company performance, the impact of cost benchmarking on company behaviours and financial resilience, and the impact of price control deliverables on performance.

h Before the development of PR29 methodology, Ofwat should seek to understand whether successful Innovation Fund projects are being taken up across the sector and the impact.

To ensure the sector can continue to attract investment, we recommend the following.

i Ofwat should develop a view on how to identify and plan for investment needs over the long term and work with Defra and the other regulators to improve transparency and predictability in light of the recent sector downgrades.